

Regina A. Rameika

Publications

Neutrino Mass and Mixing – Long term planning (1993 – present)

Accelerator-based neutrino oscillation searches. D. Whitehouse ([Los Alamos](#)) , G. Rameika ([Fermilab](#)) . 1993. Prepared for BNL Workshop on Future Directions in Particle and Nuclear Physics at Multi-GeV Hadron Beam Facilities, Upton, NY, 4-6 Mar 1993. In *Brookhaven 1993, Future directions in particle and nuclear physics at multi-GeV hadron beam facilities* 112-117.

Neutrino mass and mixing. P. Langacker ([Pennsylvania U.](#)) , R. Rameika ([Fermilab](#)) , H. Robertson ([Washington U., Seattle](#)) Particle Physics: Perspectives and Opportunities: Report of the DPF Committee on Long-Term Planning. Edited by Robert Peccei, et al. Singapore, World Scientific, 1995. In *Peccei, R. (ed.) et al.: Particle physics* 119-152.

Report of the US long baseline neutrino experiment study. V. Barger *et al.* FERMILAB-0801-AD-E, BNL-77973-2007-IR, May 2007. 109pp. e-Print: [arXiv:0705.4396](#) [hep-ph]

The NOvA Experiment (2004 – present)

NOvA: Proposal to build a 30 kiloton off-axis detector to study nu(mu) ---> nu(e) oscillations in the NuMI beamline. By NOvA Collaboration ([D.S. Ayres et al.](#)). FERMILAB-PROPOSAL-0929, Mar 2004. 112pp. Updated version of 2004 proposal. e-Print: [hep-ex/0503053](#)

The MINOS Experiment (1994 – present)

Proposal

P-875: A Long baseline neutrino oscillation experiment at Fermilab. By MINOS Collaboration ([E. Ables et al.](#)). FERMILAB-PROPOSAL-0875, FERMILAB-PROPOSAL-0875-ADD, NUMI-L-79, Feb 1995. 241pp. MINOS / Main Injector Neutrino Oscillation Search.

Refereed Physics Publications

Measurement of the atmospheric muon charge ratio at TeV energies with MINOS. By MINOS Collaboration ([P. Adamson et al.](#)). FERMILAB-PUB-07-134-E, May 2007. 16pp. e-Print: [arXiv:0705.3815 \[hep-ex\]](#)

Charge-separated atmospheric neutrino-induced muons in the MINOS far detector. By MINOS Collaboration ([P. Adamson et al.](#)) [Phys.Rev.D75:092003,2007](#).

Observation of muon neutrino disappearance with the MINOS detectors and the NuMI neutrino beam. By MINOS Collaboration ([D. Michael et.al.](#)) [Phys.Rev.Lett.97:191801,2006](#).

First observations of separated atmospheric nu(mu) and anti-nu(mu) events in the MINOS detector. By MINOS Collaboration ([P. Adamson et al.](#)) [Phys.Rev.D73:072002,2006](#).

Invited talks

New Results from Accelerator Neutrino Experiments, [Regina Rameika](#) (Fermilab), XXXIII International Conference on High Energy Physics, Moscow, Russia, July 26 – August 2, 2006

The DONUT Experiment (1994 – present)

Proposal

Measurement of tau lepton production from the process tau-neutrino + N ---> tau: Letter of intent. [B. Lundberg](#), [R. Rameika](#) (Fermilab) , [K. Niwa](#) (Nagoya U.) , [N.W. Reay](#), [N. Stanton](#) (Ohio State U.) , [V. Paolone](#) (UC, Davis) . FERMILAB-LOI-872, Mar 1993. 12pp.

Measurement of tau lepton production from the process tau-neutrino + N -> tau. [B. Lundberg et al.](#) FERMILAB-PROPOSAL-0872, Jan 1994. 40pp.

Refereed Physics Publications

Observation of tau neutrino interactions. By DONUT Collaboration ([K. Kodama et al.](#)) **Phys.Lett.B504:218-224,2001**

A New upper limit for the tau - neutrino magnetic moment. By DONUT Collaboration ([R. Schwienhorst et al.](#)). **Phys.Lett.B513:23-29,2001**

Detector/Instrumentation Publications

Detection and analysis of tau neutrino interactions in DONUT emulsion target. [K. Kodama et al.](#) **Nucl.Instrum.Meth.A493:45-66,2002.**

Identification of neutrino interactions using the DONUT spectrometer. [K. Kodama et al.](#) **Nucl.Instrum.Meth.A516:21-33,2004.**

Momentum measurement of secondary particle by multiple Coulomb scattering with emulsion cloud chamber in DONuT experiment. [K. Kodama et al.](#) [Nucl.Instrum.Meth.A574:192-198,2007.](#)

Conference Proceedings

Fermilab experiment E-872: Direct observation of nu/tau. [R.A. Rameika \(Fermilab\)](#) . Jan 1999. Prepared for 17th International Workshop on Weak Interactions and Neutrinos (WIN 99), Cape Town, South Africa, 24-30 Jan 1999. In *Cape Town 1999, Weak interactions and neutrinos* 212-216.

The DONUT experiment: First direct evidence of nu/tau. By DONUT Collaboration ([R. Rameika for the collaboration](#)). Aug 2000. 24pp. Invited talk prepared for 28th SLAC Summer Institute on Particle Physics: Neutrinos from the Lab, the Sun, and the Cosmos (SSI 2000), Stanford, California, 14-25 Aug 2000. Published in *Stanford 2000, Neutrinos from the lab, the sun, and the cosmos* ch16

Hyperon Experiments : E-800 and E-756 (1987 – 1992)

Production polarization and magnetic moment of anti-XI+ anti-hyperons produced by 800-GeV/c protons. [P.M. Ho et al.](#) UM-HE-90-12, DOE-ER-40105-836, Apr 1990. 12pp. Published in [Phys.Rev.Lett.65:1713-1716,1990.](#)

Measurement of the polarization and magnetic moment of Anti-xi+ anti-hyperons produced by 800-GeV/c protons. [P.M. Ho et al.](#) 1991. Published in [Phys.Rev.D44:3402-3418,1991.](#)

Polarization of Xi- hyperons produced by 800-GeV protons. [J. Duryea et al.](#) 1991. Published in **Phys.Rev.Lett.67:1193-1196,1991.**

Measurement of the Omega- magnetic moment. [H.T. Diehl et al.](#) FERMILAB-PUB-91-165, Jun 1991. 16pp. Published in **Phys.Rev.Lett.67:804-807,1991.**

Precise measurement of the Xi- magnetic moment. [J. Duryea et al.](#) **Phys.Rev.Lett.68:768-771,1992.**

Polarization of omega- hyperons produced in 800-GeV proton - beryllium collisions. [K.B. Luk et al.](#) **Phys.Rev.Lett.70:900-903,1993.**

Invited talks

Hyperon properties and magnetic moments. [Regina A. Rameika \(Fermilab\)](#) . FERMILAB-CONF-92-280, Oct 1992. 31pp. Published in Physics in Collision 1992:0293-324 ([QCD161:I542:1992](#))

A Review of the Fermilab fixed target program. [Regina Rameika \(Fermilab\)](#) Invited talk given at 21st Annual SLAC Summer Institute on Particle Physics: Spin Structure in High-energy Processes (School: 26 Jul - 3 Aug, Topical Conference: 4-6 Aug) (SSI 93), Stanford, CA, 26 Jul - 6 Aug 1993. Published in SLAC Summer Inst. 1993:477-492 ([QCD161:s76:1993](#)) Also in *Stanford 1993, Spin structure in high energy processes* 477-492

E-705 Charmonium and Direct Photon Production (1982 – 1986)

Referred Physics Publications

Production of chi charmonium via 300-GeV/c pion and proton interactions on a lithium target. By E705 Collaboration ([L. Antoniazzi et al.](#)). **Phys.Rev.D49:543-546,1994.**

Search for hidden charm resonance states decaying into J / Psi or Psi-prime plus pions. By E705 Collaboration ([L. Antoniazzi et al.](#)). **Phys.Rev.D50:4258-4264,1994.**

Production of J / Psi via psi-prime and xi decay in 300-GeV/c proton and pi+- nucleon interactions. By E705 Collaboration ([L. Antoniazzi et al.](#)). **Phys.Rev.Lett.70:383-386,1993.**

A Measurement of J / psi and psi-prime production in 300-GeV/c proton, anti-proton and pi+- nucleon interactions. By E705 Collaboration ([L. Antoniazzi et al.](#)). **Phys.Rev.D46:4828-4835,1992.**

Detector/Instrumentation Publications

A Fast analog photon trigger for Fermilab experiment 705. [R.A. Rameika \(Fermilab\)](#) . 1985. In *Batavia 1985, Proceedings, Triggering, data acquisition and offline computing for high energy/high luminosity hadron hadron colliders* 111-117.

The Experiment 705 electromagnetic shower calorimeter. By E705 Collaboration ([L. Antoniazzi et al.](#)). **Nucl.Instrum.Meth.A332:57-77,1993.**

Precision Charge Amplification and Digitization System for a Scintillating and Lead Glass Array. [S.W. Delchamps et al.](#) IEEE Trans.Nucl.Sci.36:680-686,1989.

An Online Trigger Processor for Large Transverse Energy Events. [G. Zioulas et al.](#) IEEE Trans.Nucl.Sci.36:375-379,1989.

A Measurement of the Response of an SCG1-C Scintillation Glass Array to a 4-GeV/c to 14-GeV/c Pions. [B. Cox et al.](#) Nucl.Instrum.Meth.A238:321,1985.

Measurement of Electromagnetic Shower Position and Size with a Saturated Avalanche Tube Hodoscope and a Fine Grained Scintillator. [R. Rameika et al.](#) Nucl.Instrum.Meth.A236:42,1985, IEEE Trans.Nucl.Sci.31:60-63,1984.

A Measurement of the Energy Resolution and Related Properties of an Scg1-c Scintillation Glass Shower Counter Array for 1-GeV to 25-GeV Positrons. [D.E. Wagoner et al.](#) Nucl.Instrum.Meth.A238:315,1985, IEEE Trans.Nucl.Sci.31:53-56,1984.

Hyperon Experiments (1978-1982)

Primary Author

The Polarization and Magnetic Moment of the Cascading Minus Hyperon. [Regina Abby Rameika \(Rutgers U., Piscataway\)](#) . FERMILAB-THESIS-1981-11, RX-993 (RUTGERS), Dec 1981. 174pp. Ph.D Thesis.

Measurement Of The Xi- Magnetic Moment. [R. Rameika et al.](#) 1984. Published in Phys.Rev.Lett.52:581-584,1984.

Measurements Of Production Polarization And Decay Asymmetry For Xi- Hyperons. [R. Rameika et al.](#) 1986.
Published in [Phys.Rev.D33:3172-3179,1986](#).

Search For Polarization In Anti-Xi0 Hyperons. [R. Rameika et al.](#) 1982. In [*Brookhaven 1982, Proceedings, High Energy Spin Physics-1982*](#), 126-129.

Collaborating Author

Precise Measurement Of The Xi0 Magnetic Moment. [P.T. Cox et al.](#) [Phys.Rev.Lett.46:877-880,1981](#).

Polarization Of Sigma+ Hyperons Produced By 400-Gev Protons. [C. Wilkinson et al.](#) 1981. Published in [Phys.Rev.Lett.46:803-806,1981](#).

The Polarization And Magnetic Moment Of The Sigma-Hyperon. [Leslie Ludwig Deck et al.](#) [Phys.Rev.D28:1-20,1983](#).

Polarization Of Xi0 And Lambda Hyperons Produced By 400-Gev/C Protons. [Kenneth J. Heller et al.](#) 1983. Published in [Phys.Rev.Lett.51:2025-2028,1983](#).

Measurement Of The Sigma0 - Lambda Transition Magnetic Moment. [P.C. Petersen et al.](#) 1986. Published in [Phys.Rev.Lett.57:949-952,1986](#).

Production Of Xi0 And Anti-Xi0 Hyperons By 400-Gev Protons. [A. Beretvas et al.](#) 1986. Published in [Phys.Rev.D34:53-74,1986](#).

Polarization and magnetic moment of the Sigma+ hyperon. [C. Wilkinson et al.](#) [Phys.Rev.Lett.58:855-858,1987](#).

New Measurements Of Properties Of The Omega-Hyperon. [K.B. Luk et al.](#) 1988. Published in **Phys.Rev.D38:19-31,1988.**

Polarization In Inclusive Lambda And Anti-Lambda Production At Large P(T). [B. Lundberg et al.](#) 1989. Published in **Phys.Rev.D40:3557-3567,1989.**

High statistics measurement of $g(a) / g(v)$ in Lambda $\rightarrow p + e^- + \text{anti-neutrino}$. [J. Dworkin et al.](#) 1990. Published in **Phys.Rev.D41:780-800,1990.**